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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Atsushi Ishikawa

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,949	Applicant(s) ISHIKAWA ET AL.	
	Examiner DONGHAI D. NGUYEN	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 23, 2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7 and 16-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “a plate which has no electric circuit element” (line 5 of claims 1 and 2) and “no electric circuit element provided on the surface of the jig” (lines 8-9 of claims 6 and 7) were not disclosed in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-7 and 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “a plate which has no electric circuit element” (line 5 of claims 1 and 2); and “no electric circuit element provided on the surface of the jig” (lines 8-9 of claims 6 and 7) are vague and indefinite because it's unclear how the plate with or without electric circuit element effects the claimed inventions.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 6-7 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by JP Patent 07-099,379 to Suga et al.

Regarding claim 1, Suga et al disclose a holding and conveyance jig (2) for detachably holding and conveying a printed circuit board (1) or a conductive material laminated plate (4) for manufacturing said printed circuit board (1), said jig comprising: a plate (5) which has no electric circuit element and having has a weak-adherence adhesive pattern (6) on a surface of the plate; wherein: said printed circuit board has a conductive portion (4) and a non-conductive portion on a surface of the printed circuit board (see Fig. 1c) and said printed circuit board or said conductive material laminated plate being is placed and held on the surface of said plate, and

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said weak-adherence adhesive pattern is formed at a position corresponding to said non-conductive portion (see Figs. 1c and 1d).

Regarding claims 6 and 7, Suga et al disclose method of conveying a printed circuit board having a conductive portion and a non-conductive portion on a surface of the printed circuit board while detachably holding said printed circuit board on a holding and conveyance jig in which a weak-adherence adhesive pattern is provided on a surface of the jig, and no electric circuit element provided on the surface of the jig, the method comprising the step of: holding said printed circuit board (1) on the surface of said holding and conveyance jig (5) in a manner such that said non-conductive portion is placed by being restricted to a surface of said weak-adherence adhesive pattern (6, see Figs. 1c and 1d) or holding said electroconductive material laminated plate (4) on the surface of said holding and conveyance jig (5) in a manner such that a portion intended for formation of said non-conductive portion is placed by being restricted to a surface of said weak-adherence adhesive pattern (6 see Figs. 1c and 1d).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 5 and 16 as best understood are under 35 U.S.C. 103(a) as obvious over Suga et al in view of US Patent 6,063,647 to Chen et al and vice versa.

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Regarding claim 2, Suga et al disclose a holding and conveyance jig (5) for detachably holding and conveying a printed circuit board (1) or a conductive material laminated plate (4) for manufacturing said printed circuit board (1) for comprising: a plate which has no electric circuit element and having has a weak-adherence adhesive pattern (6) on a surface of the plate; wherein the printed circuit board (1) has a conductive portion (4) and a non-conductive portion on a surface of the printed circuit board (see Fig. 1c), and said printed circuit board (1) or said conductive material laminated plate (4) being placed and held on the surface of said plate (5, see Fig. 1c) and a weak-adherence adhesive pattern (6 see Fig. 2 is formed on a surface of said weak-adherence adhesive layer at a position corresponding to said conductive portion (see Figs. 1c-d). Suga et al do not disclose a weak-adherence adhesive pattern (6) subjected to surface roughening (see Fig. 1b or 4b-c) is formed on a surface of said weak-adherence adhesive layer at a position corresponding to said conductive portion (see Figs. 1d and 5e). Chen et al teach the adhesive subjected to surface roughening (see Figs. 1b, 4b-4c) for facilitating the mechanical connection between the jig and the printed circuit board. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Suga et al by utilized roughening adhesive patent as taught by Chen for facilitating the mechanical connection between the jig and the printed circuit board.

Regarding claims 3, 5 and 16, Chen et al also teach the adhesive pattern has a plurality of thickness regions differing in thickness from the surface of said plate (see Fig. 5d) and a non-adhesive pattern is formed at a position corresponding to said conductive portion on the surface of said weak-adherence adhesive layer (see Fig. 1d) for the reason provided above.

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10. Claims 4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al or Suga in view of Chen et al as applied above further in view of US Patent 5,352,314 to Coplan.

Suga/Chen et al do not disclose a plurality of adhesive strength regions differing in adhesive strength. Coplan teaches the adhesive strength between layers can be controlled (different) for properly holding the layers (see Col. 4, lines 53-64). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Suga/Chen et al by utilized the weak-adherence adhesive patent having plurality of adhesive strength regions differing in adhesive strength as taught by Coplan for properly holding the substrate and jig together.

Response to Arguments

11. Applicant's arguments with respect to claims 1-7 and 16-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONGHAI D. NGUYEN whose telephone number is (571)272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571)-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
March 23, 2009

/Donghai D. Nguyen/
Primary Examiner, Art Unit 3729